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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/803,426	03/09/2001	Bruce Mortensen	0300-0016	4832

23980 7590 07/23/2002

REED & ASSOCIATES
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EXAMINER

TRAN, MY CHAU T

ART UNIT	PAPER NUMBER
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1641

DATE MAILED: 07/23/2002

13

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action

Application No.

09/803,426

Applicant(s)

MORTENSEN ET AL.

Examiner

My-Chau T. Tran

Art Unit

1641

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 01 July 0102 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will not be entered because:
- (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
- (b) ☐ they raise the issue of new matter (see Note below);
- (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
- (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____.

3. ☒ Applicant's reply has overcome the following rejection(s): See Continuation Sheet.
4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: none.Claim(s) objected to: none.Claim(s) rejected: 26-32 and 34-37.Claim(s) withdrawn from consideration: 1-25 and 38-44.

8. ☐ The proposed drawing correction filed on _____ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____.
10. ☐ Other: _____

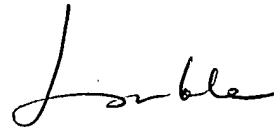
Continuation of 3. Applicant's reply has overcome the following rejection(s): The previous rejections under 35 USC 102(b) and 35 U.S.C. 112, second paragraph, for Claim 33 have been withdrawn in view of applicant's cancellation of Claim 33.

Continuation of 5. does NOT place the application in condition for allowance because: Applicant's arguments filed July 01, 2002 have been fully considered but they are not found persuasive. The examiner's rationale is set forth below.

In response to applicant's argument that there is no reasonable expectation of success by combining the teaching of Bernard with Chick given the low spectra overlap between these two fluorophores. The examiner deems that this is not the case. Both Bernard and Chick teach the method of fluorescent energy transfer for the detection of the oligonucleotides binding pair. Chick further teaches that this method could also detect other binding pair such as enzymes, hormones, antibodies, and antigen (col. 5, lines 22-32; col. 9, lines 43-50), one skill in the art would have expected these analytes would have similar orientation and distance between the two fluorophore that results in fluorescent energy transfer. Therefore there is reasonable expectation of success for combining the fluorescent energy transfer of the dye pair of cyanine 5 and fluorescein of Bernad with the different combinations of binding pairs as taught by Chick including enzymes, hormones, antibodies, and antigen.

Applicant contends that the linker taught by Lee would increase the distance between the fluorophores and the binding pair, therefore would decrease the resonance energy transfer. The examiner deems that this is not the case. Lee discloses that the fluorophores distance has increase from that of the binding pair. It did not decrease the resonance energy transfer but provided a more efficient fluorescence energy transfer.

Applicant alleges that the teaching of Dykens would teach away from the combination of fluorescein and cyanine 5. The examiner contend that this is not the case. Dykens teaches that for energy transfer to occurs the proximity distance are about 100 Angstroms to 5 Angstroms or less. Bernard teaches that distance would be a contributing factor in energy transfer between cyanine 5 and fluorescein. Therefore the fluorescent energy transfer of the dye pair of cyanine 5 and fluorescein of Bernad as modify by Chick to the proximity distance as taught by Dykens for the advantage of providing a more efficient determination the resonance energy transfer in different combination of binding pair. Further, it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.



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07/22/02